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ABSTRACT

In September 1991, Red River Community College (RRCC) in Winnipeg, Manitoba, decided to embrace the concepts of Total Quality Management (TQM) to provide an operational philosophy, enhance program curricula, and establish business opportunities. RRCC adapted W. Edward Deming's manufacturing philosophy to create its own approach, which focused on: (1) the establishment of a clear statement of organizational mission; (2) active commitment of the Chief Executive Officer; (3) employee involvement in planning and implementation; (4) definition and development of processes so employees can do a good job; (5) identification of customers and their expectations; (6) movement of responsibility and accountability far down the organizational chart; (7) a teamwork approach involving the worker knowledge base; (8) the use of data and graphical tools in decision-making; and (9) the establishment of permanent change through continuous improvement. RRCC decided to proceed on a project basis, beginning in the administrative support areas. A 16-member Implementation Team acted as steering committee, and Work Improvement Teams focused on individual projects. The first project undertaken was the development of a "one student number system" to solve the difficulties associated with students having multiple student numbers. Other projects focused on the Market Driven Training Centre processes; ergonomics in the work environment; production of communication and promotional materials; and a divisional approach to management. TQM is an approach that is threatening to some and extremely challenging and rewarding to others regardless of their position in the organization. The implementation of a full TQM approach results in a cultural change for the entire organization--a process which should be viewed in terms of years. (KP)

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TOTAL QUALITY MANAGEMENT (TQM) IN A COMMUNITY COLLEGE

by

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April 1994

INTRODUCTION

Red River Community College (RRCC) has been progressing through a period of significant change as a result of moving from being a provincial government department to a crown corporation with an external board of twelve governors as of April 1, 1993. This period coincides with a large scale movement in the Winnipeg manufacturing and service industry sector to become more internationally competitive by improving the various aspects of quality. Consequently, in September of 1991, it was decided that the College should embrace the concepts of TQM to 1) be used as the operational philosophy going into governance and beyond, 2) enhance the various program curricula to address the need for knowledgeable graduates, and 3) establish business opportunities.

The definition of TQM that has been adopted by RRCC is one developed by Oregon State University:

> *TQM is a structural system for creating organization-wide participation in planning and implementing a continuous improvement process that EXCEEDS the expectations of the customer/client.*

DETERMINATION OF THE APPROPRIATE PHILOSOPHY

A survey of the literature in early 1991 indicated that TQM was a relatively new concept as an operational philosophy within an educational environment, particularly in Canada, and it was evident that we would likely be the first community college to take such a comprehensive approach. It also became clear that there was no prescribed way of implementing TQM into an organization and that we would have to do a considerable amount of internal interpreting of any of the existing approaches.

The approach used by Dr. W. Edwards Deming was deemed to be the most flexible and easily adaptable even though it was initially devised for a manufacturing environment. Deming's 14 points listed below form the underpinnings of the entire approach.

1) Create constancy of purpose for improvement of product and service.
2) Adopt the new philosophy.
3) Cease dependence on mass inspection.
4) End the practice of awarding business on price tag alone.
5) Improve constantly and forever the system of production and service.
6) Institute training.
7) Institute leadership.
8) Drive out fear.
9) Break down barriers between staff areas.
10) Eliminate slogans, exhortations and targets for the workforce.
11) Eliminate numerical quotas.
12) Remove barriers to pride of workmanship.
13) Institute a vigorous program of education and retraining.
14) Take action to accomplish the transformation.

Further insight into how to interpret this manufacturing based philosophy can be gained by comparing some of the characteristic differences between "products" and "services." A customer owns a product which is expected to be uniform and of consistent quality with little or no direct input into the production process. On the other hand, a customer has a memory of a service that is a unique experience in which there has been active involvement in the process. Products can be put into inventory and those that are not up to specification can be discarded or reworked. Services are actions of the moment that cannot be stockpiled where quality control is conducted by comparing experience to expectation. For an improperly performed service, the only means of recourse are apologies and reparations.

This led to some essentials of TQM that have formed the basis of the RRCC approach.

a) Establish a clear statement of the organizational mission and goals so that everyone knows the direction.
b) The active commitment of the CEO is critical.
c) The implementation of TQM will vary with the organization, its strengths and weaknesses, its culture and its need to improve for long-term survival. The one constant is immediate employee involvement in both the planning and the implementation.
d) The organization must understand that 80-90% of errors and problems are a result of ill-defined or non-existent processes. The majority of employees want to do a good job so do not attack the employees.
e) For each problem, identify the internal and external customers/clients and determine their expectations.
f) Management must recognize that responsibility and accountability should be shifted as far down as possible in the organization to allow for organizational flattening and the broadening of the decision-making base.

g) Problems should be addressed using a teamwork approach that involves the "worker knowledge base." The person doing the job is usually the most knowledgeable about it and hence can contribute to the solution of associated process problems.
h) TQM requires that decisions be made using data and graphical tools wherever possible so that trends can be easily discerned.
i) Establishing permanent change through continuous improvement.

IMPLEMENTING THE SELECTED APPROACH

RRCC commenced its TQM journey in September 1991 by creating an Implementation Team that would act as the steering committee for the entire institution. Of the 16 members, 7 were appointed by management by virtue of position and the remainder were elected by their peer groups to yield the following structure.

President
Vice-President Academic
Dean, Student Affairs
Director, Finance and Administration
Director, Co-operative Education and Staff Development
Dean, Technology and Trades
Union President
3 elected instructors
3 elected support staff
3 elected department heads

As of April 1994, this Implementation Team has met a total of 53 times and continues to meet for two hours every second week. The composition has remained relatively constant with the addition of a representative from the Students' Association in June 1993, one additional department head and instructor in early 1993 and the new Dean of Aboriginal Education and Institutional Diversity.

An external consultant was used for the first 2 months as a facilitator and team builder to work through the initial stages of gaining a common understanding within the Implementation Team. It was significant that the team then elected an instructor from the Business Division to act as its chairperson and to be the full-time TQM Coordinator for the College.

The third and fourth months of the implementation process consisted of further 2 hour meetings every other week to strategize on whether to use a project-based approach or a more global one. Discussions quickly led to the identification of a number of administrative process problems that needed to be addressed to improve the service to the academic delivery. This approach fitted very nicely into the requirement to enhance almost all of the support functions and processes as the College moved from being a government department to achieving self-governance with an external board.

For each project identified, a Work Improvement Team (WIT) consisting of interested staff with the required expertise from across the organization was created. The composition of the WITs was not predicated on traditional organizational structure so a secretary from department "A" might be working with a Dean from department "B". The WITs were given an end result to work towards and then trained by the TQM Coordinator in the use of the various data gathering and analysis techniques. Each WIT was responsible for establishing its own process and for ultimately coming up with a set of recommendations that were reported to the Implementation Team and then to the senior college management for approved action where the commitment of additional resources was required.

It has proved important that the Implementation Team give serious consideration to the nature and scope of projects undertaken and there are four critical questions that should be answered.

1) How critical is the project to the organization?
2) Is the need immediate?
3) What is the potential impact on the organization as a whole?
4) How "do-able" is it? Can it be achieved?

Bearing this in mind, the most critical decision relates to the first project since it will be used by proponents and sceptics alike to measure the commitment of the organization to a TQM process.

The Implementation Team at RRCC has also taken on a project monitoring role with updates and presentations from staff working on the different activities.

The RRCC experience has also shown that the Implementation Team meetings can become forums for issues that are sometimes inappropriate such as the activities of a particular individual. These have to be addressed in a constructive manner and can easily undermine the TQM process if not moved to a forum where appropriate consideration and action, if necessary, is taken.

THE PROJECTS

At the commencement of entering into TQM activity, three major decisions were made.

1) The College would proceed on a project basis since the learning curve was steep and resources limited. This would keep the activities manageable and not create college-wide expectations that could not be met.

2) The projects would commence in the administrative support areas to the classroom first since these were perceived to be the areas of greatest change entering governance and also relatively more straightforward to define.

3) RRCC would not offer TQM training to others until it had matured in its own implementation with a target of 18 months to 2 years.

The project that was undertaken first was actually recommended by a clerk in the Accounting Department who raised the issue of excessive computer search time associated with students having a multiplicity of student numbers as opposed to only one. Further dialogue indicated that this was a problem that also affected many other college departments including the academic areas which were reviewing multiple screens of transcript information to verify that students had actually completed all the program requirements for graduation. Another interesting wrinkle was that previous attempts to change the system had been unsuccessful. Over 60 staff were involved in various Work Improvement Teams and in addition to having a "one student number system" within 8 months, many other problems were identified that are now being worked on.

The second project involved a study of the Market Driven Training Centre processes. Since this area is a microcosm of the workings of the entire College, it represented an opportunity to explore a number of aggravating process issues within a manageable context. An initial team of 9 was struck to identify the internal and external customers and prepare survey instruments to determine customer requirements and identify expected quality standards. These actions have led to the formation of 5 more WITs to date which are still in the process of analyzing data and bringing forth recommendations. It is interesting that flowcharting many of the processes showed many loops where nothing of value was added and hence there has already been some welcome streamlining.

Further projects are underway in such areas as the ergonomics of the work environment, improving the information flow and the production of college communication and promotion materials, enhancing a divisional approach to management and implementing the recommendations resulting from 3 President's Task Forces i) Services to the Aboriginal and Multicultural Communities; ii) Human Resource Development, and iii) Economic Sustainable Development. In addition, WITs are at work on the redesign of the registration system, articulating Continuing Education and daytime offerings, improving the room scheduling process, and implementing operational efficiencies.

The WIT looking into the ergonomics of the work environment is reviewing the state of offices, classrooms, labs and the College in general. It has been given a budget of $45,000 for 1993/94 to prioritize as it sees fit. Its activities are monitored by the College's Facilities Committee to ensure compliance with other College directions. This approach is proving to be very successful, it is planned that it be continued in future years.

As of June 1993, the Market Driven Training Centre has established a Centre for Quality and Innovation (CQI) which, among other activities, provides training in TQM concepts ranging from the entry level to ISO9000. The Centre has partnership arrangements with the University of New Brunswick and Perry Johnson inc. to deliver training materials. The Centre is also a key component of a Manitoba based quality network called QNET which is an umbrella

organization with a board of directors representing private industry, the provincial government, the City of Winnipeg and education.

In March 1994, the Canadian Forces through Air Command adopted a learning package on continuous improvement principles developed by the Red River Community College CQI. Delivery is planned for Air Force Wings across Canada.

In September 1993, a formal pilot project was started in the academic area with a group of instructors from the Business Division. Using the approach of Classroom Assessment Techniques (CATs) proposed by Patricia Cross, Professor of Higher Education, University of California, Berkeley, instructors ask students to respond to quick questions on a periodic basis to obtain feedback from the "customer" in the classroom. Categories of CATs include techniques for 1) assessing course related knowledge and skills, 2) assessing learner attitudes, values and self-awareness, and 3) assessing learner reactions to instruction. For example, at the end of a class the instructor might ask the students to take one minute to answer a question such as "What was the most important thing you learned today?" or "Was the introduction of this new topic at the right level?" Instructors in the project meet to compare notes. This activity is accepted as a credit within the college certification process for all new instructors. This project has proved to be very successful and plans are under way to expand this to other groups of interested instructors throughout the College for September 1994. This concept could also be broadened out to the department level where Departmental Assessment Techniques (DATs) would be used to gauge "customer satisfaction".

A further interesting area of exploration centres on the use of the twelve attributes of institutional effectiveness as developed by the Canadian Comprehensive Auditing Foundation and how they might be meshed into the TQM process. Since the Fall of 1992, RRCC has been piloting an effectiveness reporting project with the combined areas of Registration, Counselling, and Communications. The staff of these areas have spent a considerable amount of time developing effective performance indicators and this process has already had a positive spin-off effect in providing a mechanism whereby staff can evaluate their operations in a non-threatening manner. These same staff have been involved in a number of TQM process reviews and the intent is to try and formulate a linkage between TQM and an effectiveness reporting structure since TQM and effectiveness reporting are two compatible aspects of the same approach to accountable management. TQM focuses on process, and effectiveness reporting deals with the results so there should be an effective meshing of the two approaches. From the results of the pilot project it has now been determined that the College approach to effectiveness reporting will start with a series of seven questions that have been evolved from the original twelve attributes. This more manageable approach will still mesh in with the TQM processes.

In February 1994, the College designed and distributed an employee suggestion form to identify quality improvement opportunities and to facilitate their implementation and initial response to this approach has been positive.

As of March 1994, an assessment instrument is being developed to audit the progress as an institution in the total quality journey.

EFFECT OF TQM ON VARIOUS STAFF GROUPS

TQM is an approach that is threatening to some and extremely challenging and rewarding to others regardless of their position within the organization. However, there are some interesting generalizations that bear consideration. The implementation of a full TQM approach inherently results in a cultural change for the entire organization which requires new ways of thinking and doing. This type of change in a large organization does not occur overnight and is one of the reasons why TQM programs should be viewed in terms of years.

One should expect that any employee bargaining units will be no more that initially tolerant or luke warm to TQM. The unions can quote numerous examples of where TQM has been used by management to get at people rather than improve processes. This reaction can only be overcome by having union involvement from day one and maintaining a steady course of process improvement supported by senior management over a long period of time. The best advice here is to be patient and consistent and to remember that a TQM journey is one of many years, not months. The non-management staff in general will see TQM as positive because it opens up opportunities to not only improve the work processes but also to establish new ways of communicating and contributing in the organization. Resolutions often lead to employee empowerment and involvement which improves staff morale.

Perhaps the group that can find the introduction of TQM most difficult is management, particularly those at the more senior levels. For some the concept of power is entrenched in a mode of withholding information and parcelling it out as necessary and operating within well-defined operational hierarchical structures. For these types of managers, the transition is extremely tough and one should be prepared for more in-depth discussions that may require some reassessment of career goals.

SUMMARY

In looking back on the TQM activity at RRCC, I am pleased with our overall progress to date and the prospects for the long term future of TQM in our organization are extremely bright. There is little that I would change if we had the opportunity to start all over again and the more methodical project-based approach is now starting to reap benefits.

Reference: Angelo, T. A., and Cross, K. P. *Classroom Assessment Techniques: A Handbook for Faculty*. Second Edition. San Francisco: Jossey-Bass, 1993.